Consumer perceptions of precision breeding: Communicating information about precision breeding

Throughout the workshops, participants spoke about the information that consumers should receive about precision breeding without much prompting. These discussions centred around views about broad communication (i.e., public education), as well as product specific information (i.e., product labelling).

This research aimed to explore how regulation and risks of precision bred foods should be communicated to consumers. It should be noted that while participants had low awareness of precision breeding, they also had low awareness of food production methods generally. Communication around precision bred foods may be confusing if it does not consider this general lack of awareness, and work to put precision breeding information in context of wider food production methods.

This chapter discusses participants views on public education about precision breeding, labelling of precision bred products, and an online register of all precision bred organisms authorised for use in food and feed. All three of these topics shared common themes and overlapped significantly, particularly on their shared role for transparency to build public trust and ensure consumer choice.

Public education

Participants felt that the information should be made available to the public about the broad concept of precision breeding, so that they have a basic understanding of how the foods available to them may change. They felt this is important so that consumers are able to choose to learn more if they want to, know the terms to use and where to look for more information.

Public education was also seen as key to maintaining public trust in precision bred foods, and the transparency of the UK food system as a whole. Participants described clear information as a protection against backlash and misinformation. They explained that if there are negative responses to precision bred food, if the public feel misled into consuming products then the reaction and resulting distrust in UK food will be much worse than if they felt that they decided to consume precision bred foods on their own terms.

“The public have to know from a purely marketing perspective, so people are on board… Make sure the knowledge is there, so people don't feel duped.” **(Workshop 2, Northern Ireland)**

Participants also saw public education as key to consumers ability to make informed choices. They said that without knowing that there is a new type of food on shelves alongside conventionally bred foods, consumers have no opportunity to compare and decide whether or not to buy and eat these products. This was said to be particularly relevant to those who have medical conditions for food hypersensitivities, who carefully check foods for nutritional content, allergies and ingredients, but may not expect changes to basic ingredients such as vegetables.

In order for public education to build trust, participants said that communication about precision breeding should be done before products are on shelves, so that consumers have time to understand and research the change beforehand.

The key focuses of public education about precision breeding suggested by participants were:

- **How precision breeding differs from genetic modification and conventional methods.** Participants said that the key difference that made them grasp and feel comfortable with precision breeding was that the changes made could have happened naturally or through selective breeding. They felt this was key to centre in public communications so that consumers could separate precision breeding from genetic modification and judge it on its own merit.

“I think for me the clinching factor is that it could actually happen in nature. That nails it for me." **(Workshop 2, Wales)**

- **Where and why precision breeding may be more helpful than conventional methods.** Participants thought consumers would understand more about this change if they were informed about the limitations of conventional methods. They suggested informing the public about how precision breeding could address global challenges such as crop vulnerability, food scarcity, and climate change resilience.
- **The science and methods; how precision breeding is done:** Understanding the process, from development of a new seed, to growing the final crop, may help consumers to understand the purpose, benefits and risks in their own terms. Participants suggested that communication materials on this use simple language, clear diagrams or videos, and be easily available to those who are seeking out more information.
- **That this technology is regulated and tested to be safe:** Participants felt that the public need to know that precision bred foods available to buy in the UK have been tested and authorised as safe by the FSA. There were participants who felt that more detailed information should be available wish to, including: how each product was tested, what evidence was used for the assessment, and how long the process took.
- **More about the FSA:** Participants sometimes commented that they felt more comfortable and informed about precision breeding because they had learned, through their participation in this research, how involved the FSA are in regulating the safety of our food. For this reason, participants suggested that FSA conduct an awareness campaign about its own role, that it is independent, scientific, and non-political, and its processes and safety measures. They felt this should be done ahead of the introduction of precision breeding to lay the groundwork for consumers to be able to trust the FSA’s communications about precision breeding when the time comes.

“Put money into raising people's trust in the FSA. What the FSA does, why we should trust them.” **(Workshop 2, Wales)**

- **How food characteristics of products might change:** Participants thought that consumers should know whether to look out for certain changes, particularly ones that may affect consumers with food hypersensitivities, pregnancy, or medical conditions. They also wanted to be informed about changes in specific nutritional characteristics and other issues such as shelf-life.
- **Organisations involved:** As discussed throughout this report, there was a strong concern about biased decision making, with concerns that politicians and corporations may influence precision breeding decisions in their own financial or political favour, rather than the public’s interest. For this reason, participants thought the public should be actively informed about which organisations or individuals are researching, funding, campaigning for, or may profit from, precision breeding advancement. This type of public information was seen as a way to build public trust through transparency, and also combat misinformation.

Similarly, around eight in ten survey respondents say it would be important to have a range of information about precision breed food (on everything tested), particularly about allergies, pregnancy and other health conditions (which 84% say would be important). Vegetarians and people who are concerned about the impact the food they eat has on the environment or concerned about animal welfare are consistently more likely to say each of the different types of information tested would be important.

During workshop discussions, despite a broad desire for clear and transparent public education about precision breeding, there were a range of views on the level of detail, or the extent to which this information should be pushed to consumers.

One view was that there should be a major multi-media awareness campaign, actively circulating information to ensure that as many consumers as possible are properly educated about precision breeding.

“You need a media campaign to inform the public what it is, then benefits of it and any negatives if there are any at that stage. Putting a sign on a shop or a small label is not adequate to inform people.” **(Workshop 2, Northern Ireland)**

These participants reasoned that consumers should already be informed before precision bred foods are on the shelves. They suggested that if consumers understand the benefits and risks before the products are available, they have time to form some expectations and trust in the process, rather than be alarmed and pushed towards misinformation.

“Hopefully by the time the products reach shelves there will already be a campaign of awareness around what to expect and people are already informed” (Workshop 2, Northern Ireland)

“There has been an increase in conspiracy theories… you will never get rid of that no matter how much information you provide. I do think it's important, that the information is given rather than have the fear of too much information... I think it is important that scientific evidence is provided.” **(Workshop 2, England)**

However, others disagreed with this suggestion. They argued that a campaign pushing a high level of detailed information about precision breeding could overwhelm many consumers with more information than they want, need or are able to process.

Another stance was that there could be a lighter touch awareness campaign, informing consumers that a new type of food process called precision breeding may be used on some foods, and directing consumers to sources of further information. Participants suggested that this approach considers the different information needs consumers may have, accommodating for those who are anxious or keen to know more can do so, without unsettling or overwhelming consumers who are not too interested.

Participants voiced significant distrust in UK mass media, and most news sources. They felt that the news and media do not prioritise accuracy or public benefit and are instead seeking strong public reaction. They therefore thought that communications about precision breeding must carefully consider the impact of the media, making frequent references to the backlash to genetically modified foods, and how the same response could be prompted now by loud headlines.

"You'd have to be very careful about how you communicate this because it could cause another scare on the scale of GM food when it first came out. It was all over the newspapers, about how this was going to corrupt the world's crops and all that... If you're saying it's definitely not genetically modified, then that's something that needs to be communicated effectively or the public won't trust it. " **(Workshop 2, Northern Ireland)**

There were frequent suggestions of an informative unbiased documentary, featuring scientists and possibly a trusted celebrity. Participants felt that this would be a good way to introduce the scientific information to consumers in a digestible way and start conversation about precision breeding. Participants also suggested educating children in schools about precision breeding, so that they would pass the information to their parents.

Participants thought the FSA should directly share information on TV adverts and on posters at supermarkets. These methods may take a high-level approach, avoiding information overload, but directing audiences to sources for more information if they wish to seek it out.

Labelling precision bred products

Throughout workshops, participants frequently referred to labelling, with an assumption that consumers would be able to identify precision bred foods from conventionally bred foods. During Workshop 2, moderators explained to participants some key context to frame their discussion around labelling:

1. **There is a possibility that precision bred foods are not labelled as precision bred**, and that this decision will be made by a range of different agencies and will need to consider challenges around traceability (footnote 1).
2. **That any change to nutrition, allergens, ingredients, or safety will be indicated on the label**, even if that label does not state that the change is due to precision breeding.

This clarification allowed for an informed discussion, with participants able to explain their views on the important aspects of labelling with the full knowledge that precision breeding labelling may not be enforced.

With this information in mind, participants felt very strongly that precision bred products should be labelled as precision bred.

While existing mandatory labelling would inform consumers of any changes to the characteristics of the product, participants felt that this isn't sufficient on its own. They argued that being able to identify precision bred products via labelling is critical for transparency, and therefore to consumer choice and public trust.

"If you don't have the labelling on the food, you take away people's right to choose, if someone doesn't want to eat that type of food, you take away that informed choice if the label isn't there." **(Workshop 2, Wales)**

"If people who are frightened about it and they don't have to put it on their list of ingredients then you're hiding it aren't you?" **(Workshop 2, England)**

Participants also suggested that an explicit statement on labelling would protect precision bred foods and the regulation system from public backlash and misinformation. They explained that without this full transparency, it would be easier for incorrect information or concerns to grab consumers attention, especially if consumers felt they had been fed precision bred foods against their will due to a lack of informed choice.

"There is a lot of misinformation, and it would take a small number of people to say there is something bad and if it's not labelled that could snowball. So better for it to be labelled then no one can come back and say anything about not knowing what type of food they're putting into their bodies." **(Workshop 2, Northern Ireland)**

“If I didn't know, I'd feel like I'd been lied to… If you're putting it into your body you want to know.” **(Workshop 1, England)**

Participants also noted the difference between raw ingredients and processed food, sometimes suggesting that it is more important for raw ingredients to be labelled as precision bred than processed foods. They explained this by saying that consumers have different expectations and priorities when choosing these different types of food. For example, consumers would be very unlikely to expect any change to the characteristics of raw ingredients such as lose fruit or vegetables, but they do expect more complex ingredients on processed foods and may be more likely to double check nutritional content or changes to allergens.

Even though participants felt strongly that precision bred products should be labelled as such, they did acknowledge some of the challenges associated with labelling, particularly in relation to traceability. When considering labelling, participants discussed the risks outlined in Workshop 1 around the traceability of precision bred crops, and how, if there are no reliable detection methods, or if products labelled as precision bred could not be verified, this might undermine the worth and validity of labelling. This was compared to how some food labels must say “may contain traces of nuts” because producers cannot guarantee that the product has been made in a factory where there are products containing nuts.

Amongst those who strongly supported transparent precision breeding labelling, there was acknowledgement that food labelling is already very crowded and could become overwhelming or confusing. Participants considered that it would not be feasible to include all information on food labels, and so a line must be drawn somewhere.

“How far down the vault do you go with the labelling and telling people this and that? You've got to have somewhere where you stop and it's down to the individual to do more research if they feel the need to.” **(Workshop 2, Wales)**

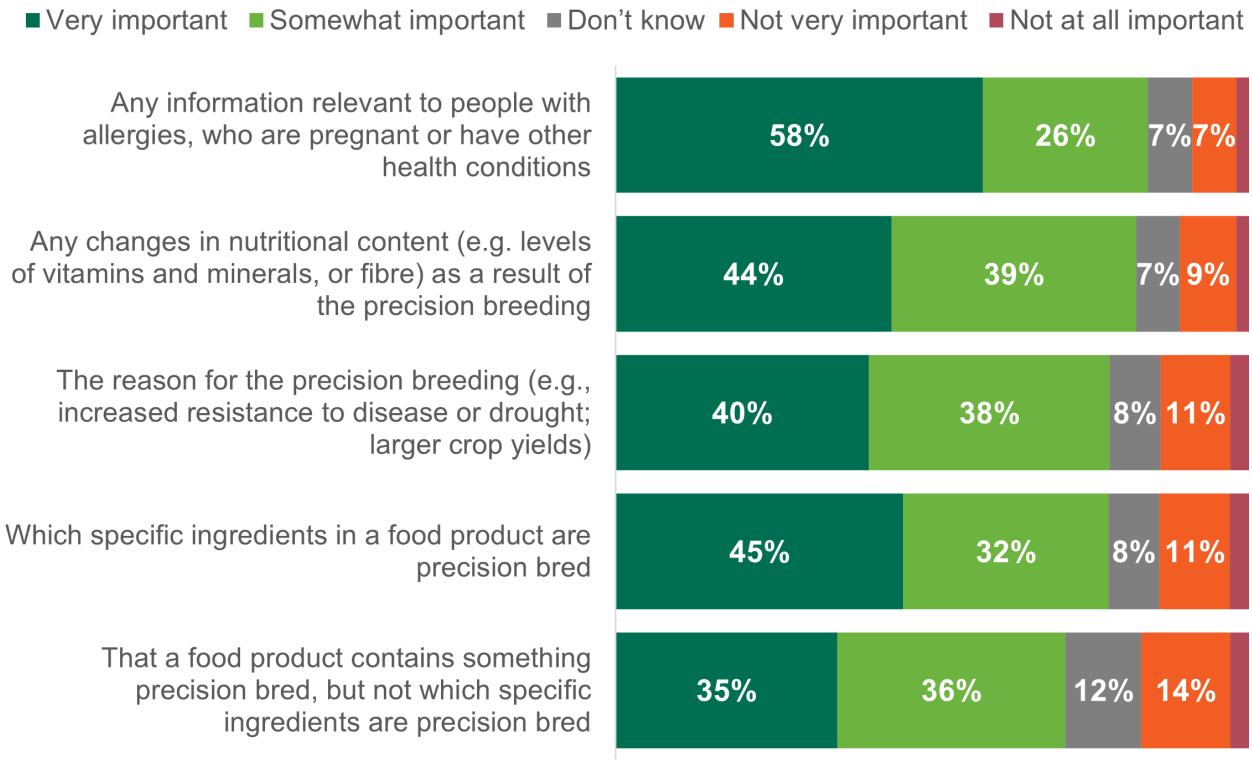
With these discussions in mind, participants shared a few ways in which they thought precision breeding labelling should be presented:

- An overall statement for the product that ‘This contains/may contain precision bred ingredients’. This would allow consumers to avoid if they wish, or to look for more information.
- In the ingredient lists, have (PB) after each precision bred ingredient. This would take up minimal space but allow consumers to know exactly which ingredients were precision bred.

- An eye catching ‘PB’ logo, with a link or QR code directing to more information.

Survey respondents agreed, with nearly four in five (77%) saying it would be important when buying a food item to know if it had been precision bred, and nearly half (45%) saying it would be ‘very’ important. Only one in six (15%) say knowing this would not be important. People in Scotland are slightly less likely to say it would be important (75%).

Figure 11: When shopping for food, how important would it be to you, to have the following information about precision bred foods?



Base: All UK respondents (4,177), and in England (1,900), Wales (1,016), Scotland (1,005) and Northern Ireland (256).

Respondent groups which are slightly more likely than average to say it is important for them to know if a food has been precision bred are female (79%), higher socio-economic groups AB (79%), graduates (80%), people who avoid certain food groups for any reasons (84%) or avoid certain production methods (85%), and people who like unfamiliar foods (82%).

According to the survey findings, the public think a range of information about precision bred food would be important when shopping. Around four in five say it would be important to have any information relevant to people with allergies, who are pregnant or have other health conditions (84%), any changes in nutritional content (82%), the reasons why the food was precision bred (78%) and which specific ingredients in the food are precision bred (77%).

Register of precision bred authorisations

Participants were informed that the FSA are considering a precision breeding register, where all precision bred organisms authorised for use in food and feed are listed on a website that is accessible to the public.

Participants were positive about some aspects of this approach but were clear about the limitations of a register as the sole methods of publicising precision bred products.

The key benefit of a register for participants was the ability to house all helpful information in one place. They felt this would be a powerful tool for transparency and public trust, and the layout of the register could accommodate far more detailed information than a product label could.

There was a common view that consumers may not be likely to use the register, but that this does not negate its important role for transparency and reassurance. Participants felt that just knowing the register exists is key to public trust, even if it is not widely used by the public.

"It would reassure people that the product and the technology was safe. It's an extra level of transparency. People might not even go and check, but if they know they can it will reassure them." **(Workshop 2, Wales)**

Participants also felt that the register could be a helpful research tool, cataloguing and tracking precision breeding as it develops over time.

“It should exist and be recorded for research purposes…[The register] is a growing, living thing, because things change and the information will grow and change with time as things progress." **(Workshop 2, England)**

Workshop discussions focused on some key limitations of the register, with the main limitation being its unsuitability as an everyday tool for consumers.

One reason given for this is that consumers would want to check individual products when deciding whether or not to purchase them, and so would want the information held on the register at the point of purchase. However, using a register while shopping was not deemed to be practical.

They would not want to check every product against the register to confirm if it is precision bred or not, nor would they be able to keep track of all precision bred items on the register and actively avoid them. Therefore, for the register to be practical, they would need to already know a product is precision bred so that they know when to refer to the register for more information.

For these reasons, participants felt that the register could be most effective if combined with some level of product labelling. They explained that this combination would enhance the benefits of the register, while also addressing its limitations:

- It would reduce the burden on labelling, by allowing labelling to simply direct consumers to the register for more detail on the product, minimising the amount of information needed on the label itself.
- It would make the register more practical for everyday use, as product labels would tell consumers when a product contains precision bred ingredients, directing them to the register when it matters.
- It would ensure that digitally excluded consumers still have a means of identifying precision bred products.

Information to be included on the register:

Participants wanted the register to be a source for all of the key information that may build public trust, and inform consumer choices:

- The outcome or benefit sought by the change: why was this ingredient precision bred.
- Who is involved: the manufacturer, the scientists who authorised it, who funded the development of this crop.
- The level of risk assessment, what tier the product was classed as, what evidence was the authorisation based on, how long the assessment took.
- The history of the crop: what original crop was altered using precision breeding, had the original crop already been precision bred, resulting in cumulative alterations?

Participants felt that the register should prioritise accessible, jargon-free language, so that consumers could understand the information.

1. Labelling is a DEFRA competency in England and the bill does not include labelling. See table 11 for outline of responsibilities of different departments/agencies.